Upper Peninsula | Michigan Works!

State of the Workforce Report

An Analysis of the Talent Supply and Demand for the Upper Peninsula

2012

UPWARD INITIATIVE
GROWING BUSINESS & INDUSTRY

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Executive Summary

The State of the Workforce Report, 2012, provides an up-to-date view of the workforce in the Upper Peninsula. The report provides a strategic analysis of workforce trends, opportunities and the current status of actions underway to strengthen the economic vitality of the Upper Peninsula.

This report is published by the Upper Peninsula Michigan Works! agencies, in partnership with the Upper Peninsula Economic Development Alliance (UPEDA) and the UPWard Initiative membership. The three Michigan Works! Workforce Investment Boards include the Western UP Michigan Works!, Michigan Works! The Job Force Board and the Eastern UP Michigan Works! The UPEDA is the primary economic development agency promoting the UP as superior location in which to invest and conduct business, with a membership of private companies, utilities and local and regional economic agencies. The UPWard Initiative was fostered by a Regional Innovation Grant Study and is the region's community response to developing a regional economic plan, with strategies and actions; its membership includes business, government, education, utilities and other community leaders.

The model for future economic prosperity is based on ideas, creativity and innovation. Creativity and innovation, coupled with entrepreneurship and risk capital generate high value-added products and services, which in turn yield higher margins, better pay and greater community wealth. Only collaboration will provide the skilled workforce and resources needed for business success and wealth creation of the Upper Peninsula.

Our collaborative efforts towards economic prosperity are well under way. Our strategic plan in driven by three key areas: Talent Enhancement for Economic Development, Resource Supply and Demand Management and Skill Development for Business and Industry. This report outlines the goals and strategies developed within these areas, as well as their current status.

The UPWard Initiative has determined the strengths, weaknesses, opportunities and threats facing each region of the Upper Peninsula. From this data, seven major categories were determined as main drivers in implementing our economic development strategies. Action teams are working on the tactics and strategies for each category: 1) Higher Education, 2) Workforce Development and Training, 3) Existing Business Growth & Business Development through Entrepreneurship, 4) Natural Resources, 5) Tourism and Seasonal/Second Home Residents, 6) Communication and Physical Infrastructure, and 7) Healthcare.

A skilled workforce must be prepared and available as each new economic opportunity comes to fruition. This report outlines the current status of the UP workforce with trend analyses of industry, occupations, wages, worker skills, worker education levels and graduation rates, projections of workforce demand, and provides conclusions and recommendations for enhancing strengths and addressing shortfalls.

This State of the Workforce Report, 2012, shares our comprehensive, collaborative, data- and employer-driven approach and status towards growing our regional economic prosperity in the 21st Century.

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Introduction: How to Use This Report

Welcome to the 2012 Upper Peninsula State of the Workforce Report. The State of the Workforce Report is a tool published by the Upper Peninsula Michigan Works! agencies in partnership with the Upper Peninsula Economic Development Alliance and the UPWard Initiative whose region includes the counties of Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft. The State of the Workforce Report provides a quantitative and qualitative analysis of the region's labor market and workforce development challenges. The report documents the work that we as workforce and economic partners see as vital to growing the economy of our region.

How to Read this Report

The 2012 State of the Workforce Report is a follow-up to the Upper Peninsula Strategic Workforce Plan adopted by the three Michigan Works! Workforce Boards and to the Regional Innovation Grant (RIG) study published in September of 2009 that fostered the UPWard Initiative, our community response to developing a regional economic plan that included actions and strategies in seven key areas to build our region's economy. Those seven areas include Natural Resources, Education and Workforce Training, Health Care, Tourism & Seasonal Residents, Infrastructure, Business Growth & Development and Higher Education. The State of the Workforce Report includes overall trends for a number of community factors that are relevant to the local and regional labor market, including workforce supply and demand-side indicators, and offers an analysis of the implications these trends have for achieving workforce excellence in the Upper Peninsula. This report also provides a brief assessment of the career development system and how the education and training providers in the community are collaborating to meet the needs of employers, job seekers and workers.

This report is descriptive, not prescriptive. It attempts to present a clear picture of the current status of a range of elements that are central to understanding important workforce and workplace issues. The report offers analysis of challenges and opportunities suggested by the work of the UPWard Initiative workgroups as they implement the strategies outlined in the 2009 Regional Innovation Grant Study and the work of the regional workforce boards in implementing the regionally adopted strategic workforce plan.

A better understanding of our shared challenges is essential in continuing our efforts in developing a unified community response to workforce and economic development. The overarching goal of this State of the Workforce Report is to share data with business, government, labor, education and other community leaders that express a serious commitment to workforce development that is essential to the region's economic vitality. High-quality human resources have always been an important component to our region's economic success. In this fast-changing, technology-driven economy, workforce issues/talent management are integral to how we position our region for sustainable economic growth.

Acknowledgements

The information contained in this report comes from several sources, including statistical information compiled by the U.S. Census Bureau, the Federal Bureau of Labor Statistics, the EMSI and www.milmi.org. These data sources were supplemented with information collected through the Regional Innovation Grant study, The Workforce Boards' Strategic Plans, Workforce Development Strategies, Inc., and with input from the region's employers. In the report you'll find citations for the sources of specific charts and graphs. In addition, shortly after publication of the printed version of this report, an electronic version will be posted at www.jobforce.org and www.upeda.org.

Preparation of this *State of the Workforce Report* was a collaborative effort between the UPWard Initiative, the Upper Peninsula Economic Development Alliance, the Eastern UP Michigan Works!, Michigan Works! The Job Force Board, the Western UP Michigan Works! and the Upper Peninsula Economic Development Alliance.

Strategic Context – How is Michigan's Upper Peninsula Positioned for the 21st Century?

What is the "Upper Peninsula"?

The Upper Peninsula of Michigan is a rural region of 15 counties encompassing 16,452 miles. The region's population (to include Northeast Wisconsin Counties of Florence and Marinette) is 355,597 people of which 205,000 are in the civilian labor force. Although this region makes up only 3% of Michigan's population, it does make up 1/3 of the size of the state of Michigan. As of December 2011, unemployment in the region was at 9.6 percent, up from 8.2 percent in November, lower than Michigan's average rate of 10.6 percent, and higher than the national rate of 9.1 percent.

During the last year, economic developers, elected officials and community leaders in various sectors in the region have focused on defining a viable strategy for economic growth and prosperity through work on the UPWard Initiative and in support of the region's strategic plans through partnership and collaboration with the workforce investment boards (known as Michigan Works! agencies). This report continues that focus by examining the state of the region's workforce, including looking at the profile of today's workforce, needs of employers, and key issues about education's role in meeting those needs.

Why does "Regional" Matter?

Per the Regional Innovation Grant (RIG) study, there are many good reasons to support a regional plan as we assume ownership for implementation of that plan. According to the RIG study, the biggest, best and most imperative reason for undertaking this study, creating a regional plan and collaborating to make the plan work, is the economic reality of the New Economy and what it has done to the economic standing of Michigan and other Midwestern states. According to the Bureau of Economic Analysis, Michigan has gone from 10th place in personal capita income among all states to 38th, the largest fall by any other state for the period 1965-2008.

How is the Upper Peninsula Positioned?

As the RIG study recognized the efforts of our region's workforce boards, economic development alliances, post-secondary initiatives, regional skills alliances, private-public partnerships and state agencies, it concluded that as a region we needed to focus our energy and resources on economic opportunities to build our economic viability.

- ***Competing on low wage production.*** Many markets, mostly in other nations, are competing for manufacturing jobs on the basis of low wages and operating costs. This approach tends to be attractive for relatively simple, repetitive jobs – "old style" manufacturing.

- ***Competing on high skills that can support higher wages.*** This model is the so-called "advanced manufacturing" approach. These employers organize work to take full advantage of a skilled, flexible workforce and of state -of-the-art automation to reach success.

The challenge for the Upper Peninsula is to fully embrace the notion of becoming a high-skills region that is focused on growing employment in advanced manufacturing and other sectors that can use those skills successfully. This report presents a baseline of information about where the region stands today. The region has very positive elements, as well as other areas in need of work.

Insights from the Strategic Plan and the Regional Innovation Grant Study

Under the 21st Century Workforce Initiative, the Michigan Works! Workforce Investment Boards in the Upper Peninsula established the framework to collaborate more strategically with regional economic development efforts as the Boards focused on developing, attracting, and retaining talent to build and support the 21st Century economy. The Boards set forth the following strategic goals to build the overall economic competitiveness of our region in 3 key areas: Talent Enhancement for Economic Development; Resource Supply and Demand Management; and Skill Development for Business and Industry.

1. **Workforce Improvement for Economic Development**

   Goal: *To build regional competitiveness through collaborative partnerships*

   Strategies:

   a. Support entrepreneurship to foster entrepreneurial spirit in the workforce and to support a diverse economy by:
      - Providing entrepreneurial awareness at Michigan Works! Service Centers
      - Supporting and seeking ways to continue integrated entrepreneurial curriculum in K-16

   b. Support partnerships that align career pathways with economic development goals by:
      - Marketing current and projected labor market demand to students, educators and parents through the Career Connections Group and education stakeholders
      - Michigan Works! Service Centers assisting K-12 and beyond with career pathways and preparation

   c. Establish and grow regional partnerships by:
      - The Job Force Board providing a communication structure to educate and inform community stakeholders on initiatives that enhance the region's economic viability

   d. Support and promote industry led alliances that are aligned with workforce board strategic plans and regional economic development by:
      - Fostering industry led collaborative groups
      - Building capacity in conveners of industry-led alliances

2. **Resource Supply and Demand Management**

   Goal: *Manage human resources to meet industry demand*

   Strategies:

   a. Develop a region-wide recruitment plan by:
      - Increasing linkages between Michigan Works! Service Centers, secondary school guidance services and post-secondary placement offices
      - Maintaining and growing market share of job seekers accessing Michigan Works!

   b. Market availability of workforce to existing and potential business by:
      - Publishing, promoting and marketing federal, state and local labor market data

c. Provide value-added labor exchange service by:
    - Aligning knowledge, skills and abilities with employer requirements to reduce post-hire training and turn-over costs
    - Maintaining and growing market share of business use of the Michigan Talent Bank

d. Expand and enhance retention services by:
    - Developing an employee peer mentoring system for first-time or at-risk entrants to the labor force
    - Promoting and supporting human resource services to business and industry

e. Improve income through industry partnerships by:
    - Developing career ladders to move entry-level workers to more skilled levels
    - Developing career lattices to move workers laterally
    - Developing career progression models that transition working poor to family sustaining wages

3. Skills Development for Business and Industry

Goal: *Build and prepare a skilled and competitive workforce for Central Upper Peninsula business and industry*

Strategies:

a. Identify skills among the labor supply by:
    - Implementing a soft- and hard-skill inventory of job seekers accessing Michigan Works!

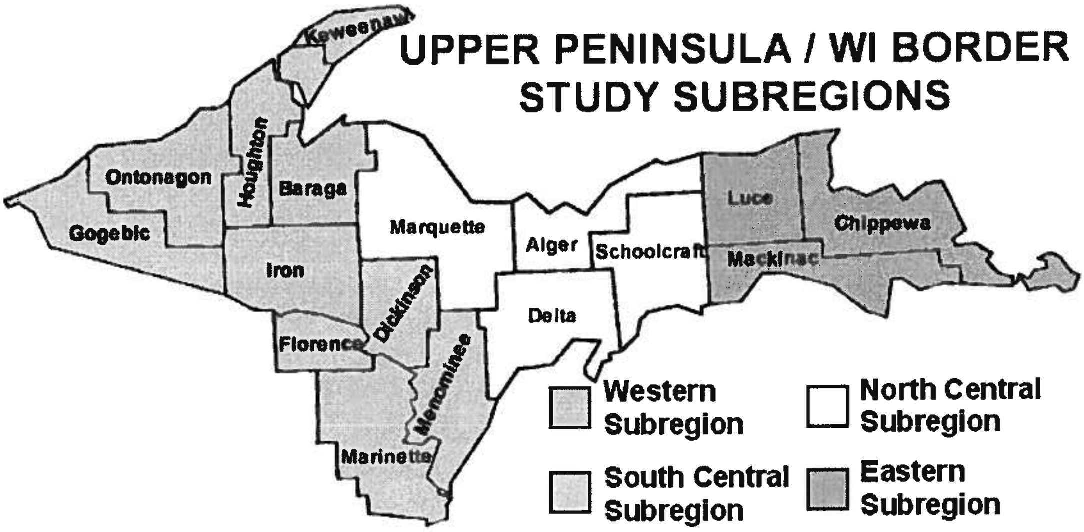
b. Identify skill demand by:
    - Aggregating primary and secondary data to measure the demand for occupations and skill-sets by regional employers

c. Train the labor market for skill gaps by:
    - Developing and delivering employer demand-driven occupational skill-based training
    - Promoting contextual learning applications to teachers and students

d. Promote systems that validate skill attainment and credentialing by:
    - Supporting and promoting incumbent worker training that aligns with business and industry demand and results in skill attainment and a credential for the learner
    - Supporting and promoting skill credentialing to meet technology demands of business and industry

Nearly two years ago, the Upper Peninsula Michigan Works! Agencies, the Upper Peninsula Economic Development Alliance and the Michigan Small Business and Technology Development Center partnered to commission a Regional Innovation Grant (RIG) study by NorthStar Economics, Inc. The result was the 2009 "An Economic Opportunity Study for the Michigan Upper Peninsula/Wisconsin Border Region".

As the Upper Peninsula works together to support growth in our regional economy, based on the input of our local communities, the following chart summarizes key findings from the study and suggests some of their implications from a workforce development perspective. The study identified 4 sub-regions in the Upper Peninsula as West, North Central, East and South Central. These findings offer a context for the workforce information that follows.



NORTH CENTRAL REGION STRENGTH, WEAKNESS, OPPORTUNITY, THREAT	COMMUNITY INPUT
Strengths:	
• Workforce Issues	• Abundance of available workers; Midwestern work ethic; educated and trained labor force; entrepreneurial spirit
• Natural Resources	• Natural beauty; logging/mining (balancing environmental concerns)
• Recreation/Tourism	• Year around activities
• Healthcare	• Available; close to home; steady employment
• Education	• Colleges and Universities
• Industry	• Pulp paper and manufacturing
Weaknesses:	
• Lack of economic diversification	• Not enough good jobs to go around; over dependence on tourism and other industry sectors
• Taxes	• Property tax rates too high to be competitive - both commercial and residential
• Location	• Isolated location; distance to population centers; lack of access to services
• Infrastructure	• Highways; insufficient power needs to handle future growth
• Government	• Power of environmental groups and unions; state and federal government not responsive to service

	needs of businesses
• Workforce Issues	• Unmotivated workers; lack of initiative; influence of labor unions
• Winter Weather	• Heavy snowfall exacerbates transportation infrastructure problem; makes the region less desirable to new recruits
Opportunities:	
• Business Growth	• New niche and cottage industries; attract more manufacturing; create and attract jobs consistent with abilities and ambition of workforce
• Natural Resources Industries	• Ease restrictions on logging and mining; capitalize on green energy movement
• Alternative Energies	• Wind energy - usage and component manufacturing; biofuels and forest products
• Education	• Expand partnerships between universities; expand programming and relationships with area businesses to keep more graduates from leaving the area
• Tourism and Recreation	• Expanded marketing effort to raise awareness of natural beauty, winter sports opportunities, camping/hiking and other outdoor activities
Threats:	
• High cost of doing business	• Remote location; infrastructure problems; high taxes; labor union influence
• Workforce Issues	• High unemployment/lack of job opportunities; declining work ethic
• Healthcare Costs	• Rising costs; isolated location reduces available options
• Aging Population	• Increased need for social services and health care, etc.
• Government	• "Anti-business" policies and regulations; harsh tax climate; restrictive environmental regulations

SOUTH CENTRAL REGION STRENGTH, WEAKNESS, OPPORTUNITY, THREAT	COMMUNITY INPUT
Strengths:	
• Workforce issues	• Abundance of available workers; strong work ethic; abilities and attitude of labor force; strong desire to remain in the area despite lower wages
• Natural resources	• Forestry; natural beauty; water; outdoor activities
• Recreation and tourism	• Open spaces; outdoor activities; bodies of water
• Healthcare	• Quality and value of service; importance as an employer
• Education	• High schools, colleges and universities, vocational and trade schools; good value and quality education
• Quality of life	• Small town feel; sense of community; friendly people; low crime rate; beauty of surroundings

• Seasonal and retired residents	• Contribute to the tax base; draw more activity to the region
Weaknesses:	
• Lack of economic diversification	• Not enough positions matching skill sets of the workforce; over dependence on particular industry sectors; not enough manufacturing and jobs suitable for workers with less formal education
• Taxes	• Tax rates viewed as excessive, an impediment to both business and home owners
• Government/politics	• Poor representation; no sense of investment in the region among officials; insignificant resources routed to the region for projects or initiatives
• Workforce issues	• Lower wages; lack of specialized skills for certain industries
• Infrastructure	• Transportation; lack of mass transit and high capacity shipping options
• Aging population	• Lack of young workers; greater need for services for the elderly
Opportunities:	
• Workforce	• Lack of job opportunities and competitive wages; brain drain
• Business Growth and Development	• Attract new businesses; incentivize startups; more retail and tourism-based entities; more value-added manufacturing
• Natural resource industries	• Ramp up logging and mining; explore wood products
• Alternative energies	• Cellulose and wood by-products, etc.
• Education	• More training programs; explore expanding 2-year schools to offer 4-year degrees; expand partnerships between universities; expand programming and relationships with area businesses
• Tourism and recreation	• Vacation packages and specials; expanded marketing campaign
Threats:	
• Business climate	• Plant closings; loss of manufacturing; lack of diversification of industries; government interference
• Workforce	• High unemployment/lack of job opportunities; loss of young workers
• Healthcare	• Rising costs; potential decline in service
• Aging population	• Increased need for social services; increasing disparity of community needs
• Government	• High taxes; policies and regulations that hinder business; restrictive environmental regulations; lack of proper attention and allocation of resources

EAST REGION STRENGTH, WEAKNESS, OPPORTUNITY, THREAT	COMMUNITY INPUT
Strengths:	
• Education	• Colleges and universities in particular; training; employment opportunities
• Environment	• Fresh water; undeveloped land and green space; natural beauty
• Recreation and tourism	• Lake Superior; snowmobiling/winter sports; hiking, etc.
• Workforce issues	• Abundance of workers at a reasonable cost; strong work ethic; desire to work in the area; less volatile industry base than lower Michigan due to lack of reliance on auto industry
• Government	• Strong public sector; jobs at prisons and with other agencies
Weaknesses:	
• Lack of diversification	• Poor industry representation; not enough high-paying, full-time jobs to meet demand; too much reliance on tourism; business owners unwilling to take chance on locating in the area; lack of high-tech businesses
• Location	• Remote location; distance to population centers; cultural opportunities and attractions; lack of affordable access to services
• High prices	• Gasoline; goods and services obtained at higher cost due to location
• Infrastructure	• Highways; access to shipping by air, road, or rail
• Workforce	• Brain drain; low density; perceived decline in skill level; departure of young workers
• Climate	• Harsh winter driving conditions make remote locations even less accessible and less likely to be visited
Opportunities:	
• Business Growth and Development	• New niche and cottage industries; attract more manufacturing; create and attract jobs consistent with abilities and ambition of workforce
• Alternative energies	• Green" energy; biofuels; ethanol; wood; wind
• Education	• Expand partnerships between universities; expand programming and relationships with area businesses to keep more graduates from leaving the area
• Tourism and recreation	• Expanded marketing effort to raise awareness of natural beauty, winter sports opportunities, camping/hiking and other outdoor activities
• Retirees	• Remote location may be a selling point to people looking to retire in a pleasant environmental setting; attract them to the region

Threats:	
• Workforce issues	• Record high unemployment rate, lack of jobs, lack of diversification, inability to retain young workers
• High cost of doing business	• Isolated location; higher fuel and shipping costs; infrastructure problems; high taxes
• Healthcare	• Rising costs; isolated location reduces available options
• Infrastructure	• Road, rail and air service; adequacy of power lines

WEST REGION STRENGTH, WEAKNESS, OPPORTUNITY, THREAT	COMMUNITY INPUT
Strengths:	
• Workforce issues	• Abundance of workers; strong work ethic; education of labor force; enthusiasm
• Natural resources	• Forests and green space; lake frontage; beautiful areas; forestry; availability of land; minerals; ore
• Recreation and tourism	• Lake Superior; outdoor sports; wooded areas; hiking; snowmobiling/skiing/winter sports, etc.
• Education	• Abundance of colleges and universities in particular; quality K-12 system
• Quality of life	• Beautiful surroundings; communities full of "down to earth" people; nice place to raise a family; low crime rate
• Industry	• Health care, manufacturing, etc.
• Transportation	• Rail service connections
Weaknesses:	
• Lack of economic/industry diversification	• Not enough good jobs to sustain the workforce; over dependence on tourism and other industry sectors
• Location	• Isolated location; distance to population centers; perception by outsiders as being too far to travel; lack of access to services
• Infrastructure	• Rail, highways, etc.
• Workforce issues	• Lack of adequate workforce training; "brain drain"
• Winter weather	• Heavy snowfall; creates logistical and marketing issues
• Taxes and utility rates	• Too high; disproportionate; creates competitive disadvantage
Opportunities:	
• Business Growth and Development	• Partner with Native American tribes; explore new manufacturing ideas
• Alternative energies	• "Green energy"; wind power - usage and component manufacturing, biofuels and forest products
• Education	• Expand partnerships between and among universities and businesses

• Lake Superior • Tourism and recreation	• Commercial port activity; recreation • Expanded marketing effort to raise awareness of natural beauty, winter sports opportunities, camping/hiking and other outdoor activities
Threats: • Remote location • Workforce issues • Healthcare • Natural resources • Investment capital	• Deemed too remote by some; hard to market; exacerbated by weather • High unemployment; lack of job opportunities • Rising costs; isolated location reduces available options • Difficult to use to their potential due to influence of environmental lobby • Lack of funding sources; lack of awareness of available options

The goal of this regional plan under the partnership of the workforce boards and the Upper Peninsula Economic Development Alliance, as stated in the RIG study, is to build on the work ethic and the demonstrated willingness of people in this region to work hard to improve the economic fortunes of the UP/Wisconsin border region. To do that in this New Economy will require a region-wide approach to economic development.

A region-wide approach will help to address the following New Economy challenges:

- Scale of Problems, Challenges and Opportunities – The current, largely independent efforts of over thirty UP/WI border region economic development organizations cannot address the scale of problems, challenges and opportunities that arise in the New Economy. Individual areas or regions cannot address issues like educational attainment, workforce training, supporting the formation of new businesses and other such issues.

- Speed of Economic Change – In the last six months two giants of the American economy, Wall Street and the domestic auto industry, have been dramatically reshaped. There are other examples of rapid positive change including the growth of Google, Facebook, and other companies and industries that demonstrate the speed of change and need for information and networks to keep up with or get ahead of a rapidly changing economy.

- Globalization of the Economy – Competition from foreign companies and economies has reshaped many facets of the U.S. economy. U.S. manufacturing businesses have declined and disappeared. On a positive note, foreign direct investment in the U.S. provides an opportunity to rebuild some industries and establish others.

In light of these New Economy challenges and others, the UP/Wisconsin border region needs to focus its economic development efforts. A region-wide effort can harness the political connections of the region in an era in which government is playing a larger role in the economy. A region-wide effort can enhance the higher education assets and initiatives and can build the brain power and research capacity of the region. A region-wide effort can focus on New Economy jobs that may attract or keep younger people in the region.

In assessing the information in this State of the Workforce Report, it will be important to test the strategic focus suggested by the RIG study. What indicators emerge that can point to opportunities for high-wage, high-productivity employment? What barriers exist to achieving that vision?

This region is turning vision into action. Based on the results of the RIG study and aligning that initiative to our region's Strategic Plan, the RIG study has transitioned to what is called the UPWard Initiative. Workgroups composed of community members from across the Upper Peninsula are working together on the following strategies and tactics to build the U.P. economy and manage the talent of our worker pipeline.

Competitive Advantage

The Upper Peninsula border region has a number of competitive advantages on which to build economic development strategies.

- Higher education cluster: There is a concentration or cluster of higher education institutions in the region. Thirteen entities serve students in the region, including three comprehensive universities, a private college, tribal colleges, community colleges, a technical college, and two statewide extension services. These post-secondary schools serve over 25,000 students, and several are developing academic and research specialties and training programs that hold great promise. The current level of research from the higher education cluster is in excess of $60 million. (Source: National Science Foundation data.)

- Timber and hardwood forest stands: Forest resources represent an asset of both considerable beauty, as well as a significant economic opportunity, as the forest products industry cluster continues to expand.

- Mineral deposits: The region enjoys robust mineral deposits. Townships in the region grew up around limestone, copper and iron mining, and operations continue in the region to this day. The recent discovery of new deposits of nickel, silver, and gold hold great value in an era of increasing resource demand from developing countries.

- Water and shoreline: Water and snow play significant roles in the regional economy. By virtue of an abundance of Great Lakes shoreline, as well as the highest rate of snowfall for any non-mountainous region in the country, the study region is poised to cater to the needs of a variety of outdoor enthusiasts. The vast amount of publicly-owned land adds to the unique character of the region. While the large amount of protected property raises certain challenges, the amount of unspoiled wilderness represents a significant asset to the region.

In addition to these competitive advantages, the region has a stable, productive workforce, and employers do note the presence of a good work ethic. Taking into account these factors that give the region a competitive advantage, and encompassing all of the information gathered during the course of this study, several prime economic development opportunities have emerged. It is the opinion of the consultants that seven major categories ought to be considered for the implementation of economic development strategies:

- Higher Education
- Workforce Development and Training
- Existing Business Growth & Business Development through Entrepreneurship
- Natural Resources
- Tourism and Seasonal/Second Home Residents
- Communication and Physical Infrastructure
- Healthcare

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Strategies and Tactics by Category

Higher Education – Build on the higher education cluster in the region; expand enrollment, research and entrepreneurial activity; raise educational attainment of the regions workforce

Education & Workforce Training – Increase the skill and education of the regional workforce to increase competitiveness

Business Growth & Development – Work to grow existing businesses and the number of new businesses; establish a region-wide culture of collaboration and innovation to attract entrepreneurs and existing business investment;

Tourism – Have the region become a major tourism destination and 2nd place of residence

Infrastructure – Develop a 21st century vision for broadband/cellular service, highways, rail service and air service

Natural Resources – Continue to promote use of the region's natural resources in an environmentally sound, safe and sustainable manner and focus on proactive strategies that promote value-added economic activity within the region

Healthcare – Provide citizens of the region with the highest quality, affordable, convenient health care services available

The State of Michigan's Upper Peninsula's Workforce

The pages that follow contain a snapshot of major characteristics of the region's *workforce from a variety of perspectives:*

- Characteristics of the supply of workers – age, availability, demographics, and other descriptors about the workforce
- Analysis of the demand for workers – employment levels, key industries, wage patterns, and other demand side information
- Examination of the educational attainment of students in the region

The indicators that follow point at potentially crucial issues in steering the economic future of the Upper Peninsula. Without question, they reinforce the opportunity to grow the region's economic prosperity and give clues as to key strategic opportunities.

Key Indicators

Workforce Supply

- Population Is Declining In The Region
- Region's Population Is Aging
- Labor Force Has Been Shrinking Since 1995
- Most Workers Are Living And Working Within The Region

Workforce Demand

- Manufacturing Industry Is Dominating Employment Base
- Region Is Lacking Good Paying Service Sector Jobs
- Wage Disparities Are Reflecting Two Economies
- Employers Are Competing Globally And Locally
- Employers Are Gaining Competitive Advantage Both From Quality Efforts And Cost Management
- Growth Companies Are Struggling To Find Qualified Workers; Seeking Higher Skills
- Employers Are Being Creative In Attracting And Retaining Qualified Workers
- Volume Of Health Care Pipeline Is Lagging; Needing More Community-Based Training Opportunities
- Region's Top 10 Job Clusters Point To Importance Of Advanced Manufacturing, Higher Skill Jobs
- Top Occupations Are Requiring More Complex Skills
- Top Work Activities Are Supporting Need For Higher Order Skills

Education and Training

- School Enrollments Are Declining In The Region
- Vocational Education Enrollments Remain High
- Graduation Rates Are Generally High; Enrollments At Higher Education Institutions Are Declining
- Region Is Successfully Meeting State Performance Measures; Students Are Scoring Well Compared To State Averages
- Many Educational Programs Aren't Adequately Testing For Skills Mastery
- Educational Infrastructure Is Offering An Array Of Programs, But Lacking An Integrated Career Learning System
- Career Education Is Not As Highly Prized As Academic Education
- Career Opportunities And Workforce Trends In The Region Are Not Consistently Communicated To Educators And Students

Population is Declining in the Region

HOW ARE WE DOING?

Initial data from the 2010 census shows that all but three (3) of the 15 Upper Peninsula Counties has declined since the 2000 Census.

- Twelve of the peninsula's fifteen counties declined over the decade, according to the census. Growth was confined to Houghton and Marquette counties, which have universities, and Baraga County, home to a maximum-security prison.

	2000	2010	% Change
Michigan	317,600	311,361	-2.0%
Alger	9,860	9,601	-2.6%
Baraga	8,739	8,860	1.4%
Chippewa	38,543	38,520	-0.1%
Delta	38,528	37,069	-3.8%
Dickinson	27,474	26,168	-4.8%
Gogebic	17,375	16,427	-5.5%
Houghton	36,013	36,628	1.7%
Iron	13,129	11,817	-10.0%
Keweenaw	2,296	2,156	-6.1%
Luce	7,028	6,631	-5.6%
Mackinac	11,941	11,113	-6.9%
Marquette	64,634	67,077	3.8%
Menominee	25,323	24,029	-5.1%
Ontonagon	7,817	6,780	-13.3%
Schoolcraft	8,900	8,485	-4.7%

2010 U.S. Census Bureau.

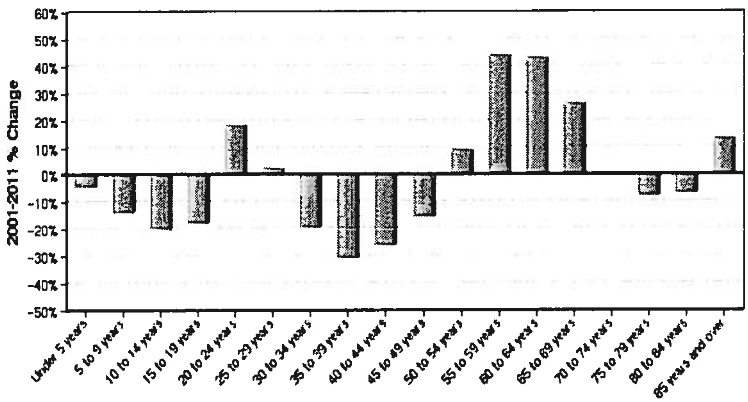
WHY IS THIS IMPORTANT?

- **Strategies need to account for declining growth.** Population trends set a crucial context for making talent management decisions. Understanding that the region has experienced a declining population over the long term can point policy makers at two types of strategies: actions designed to turn this trend around, and actions designed to maximize the productivity of workers who now live in the region. Without a credible strategy, low-growth regions risk being perceived by employers as places in which they won't be able to find the workforce they need.

Region's Population Is Aging

HOW ARE WE DOING?

Individuals 50-69 years old had the biggest growth rate in population in this region from 2002 through 2012. The biggest decline occurs in the age group of 30 – 49 years old. The average median age for this region is 40.8 years. All counties in the region showed an increase in the median age except the counties of Baraga, Houghton and Marquette.



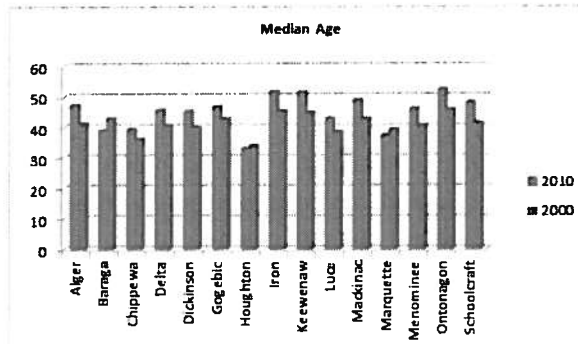
WHY IS THIS IMPORTANT?

The age mix of the workforce points at several challenges and opportunities:

- **Retirements will continue to grow.** The number of those either retired or soon to be eligible to do so is growing significantly, with a sizable number of younger workers who could be candidates to fill those gaps leaving the region.
- **The region does not have a solid base of workers** in the prime 35-54 age range to draw upon.
- **Entry-level jobs may be among the hardest to fill,** given the comparatively small proportion of 18-34 year olds in the region.
- **Making effective use of older workers** represents an opportunity in the region.
- **Census Data** reflects employer concern for an adequate worker pipeline.

Global Economy Impacts U.P. Workforce

Surveys completed by the Upper Peninsula Healthcare Roundtable and the Upper Peninsula Regional Industrial Manufacturing Skills Alliance have reported that anticipated retirements have not occurred in the region. The region may not be facing an immediate crisis in retirement of skilled workers. The surveys suggest that these industries continue to require skilled labor to support industry requirements and needs. There has been a collective effort in outreach to parents and students about careers in manufacturing, pointing to a strategy that will offer more young people a reason to stay in the region than now do. Conversely, the region may be able to better attract and stimulate firms capable of significant growth by pointing to the potential labor pool of young workers who do not leave the region to start careers.



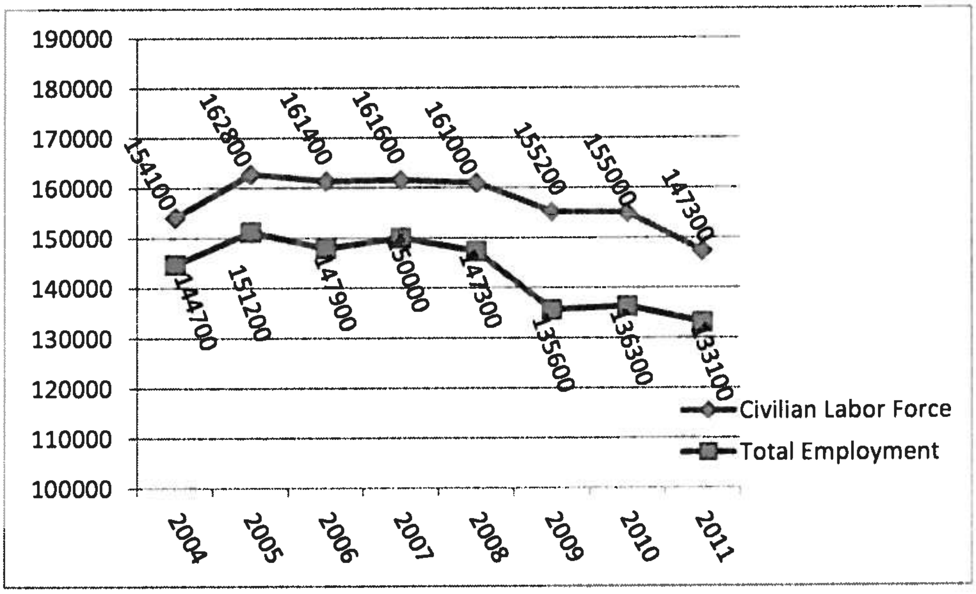
Median Age, 2010 Census

Labor Force Has Been Shrinking Since 2004

HOW ARE WE DOING?

Labor force participation includes both people who are employed and those currently unemployed. Both the number of the region's residents who are employed and the size of the labor force in the Upper Peninsula continues to decrease. (May 2004 to December 2011).

For all of 2011, the Upper Peninsula jobless rate averaged 10.0 percent, down nearly two full percentage points from the 2010 level. This rate was slightly below the Michigan annual rate of 10.4 percent.



Michigan LMI Civilian Labor Force Estimates

WHY IS THIS IMPORTANT?

The shrinking labor force creates both challenges and opportunities:

- The total pool of persons looking for work is shrinking.
- Labor force participation rates do not include people who are not looking for work, whether because they are discouraged or for voluntary reasons.
- If flexible work schedules, day care benefits, healthcare etc., are offered, some of those now choosing not to work may decide to become part of the labor force.

Occupational Growth and Decline

The Economy of the Upper Peninsula changed significantly from 2001 through 2011. A total of 3,454 manufacturing jobs were lost (- 24%). While this trend was also seen at a state and national level, these losses have taken a substantial toll on the economy of the Western Upper Peninsula where unemployment levels are at an all-time high due to the closures of a number of manufacturing facilities including Terex Handlers and Smurfit Stone Container.

Another sector that lost jobs from 2001 through 2011 was Government, with a total negative growth of 3,486 (-9%). It is noteworthy that while these losses were sizeable, government remains the primary source of jobs in the Upper Peninsula with a total of 28% currently. This may be a concern to be addressed as with shrinking budgets at all levels and areas of government, it would be necessary to reduce labor force numbers from the township level to the federal level meaning more job losses. It is critical that strategic partners across the region determine a strategy to manage these reductions in force and transition public sector workers into new employment.

While leisure and hospitality provide the lowest average earnings per worker, this area also saw a 9% overall job loss from 2001 through 2011. Tourism is an important industry in the region, requiring workers who have customer service skills and knowledge of the area. Job losses in the hospitality industry threaten the overall economic viability of the region and should not be ignored. Additionally, these entry-level positions are important to populations such as students, new entrants to the workforce, retirees needing a second income, TANF recipients, lower-skilled individuals and others. Any comprehensive workforce strategy should take this sector into consideration.

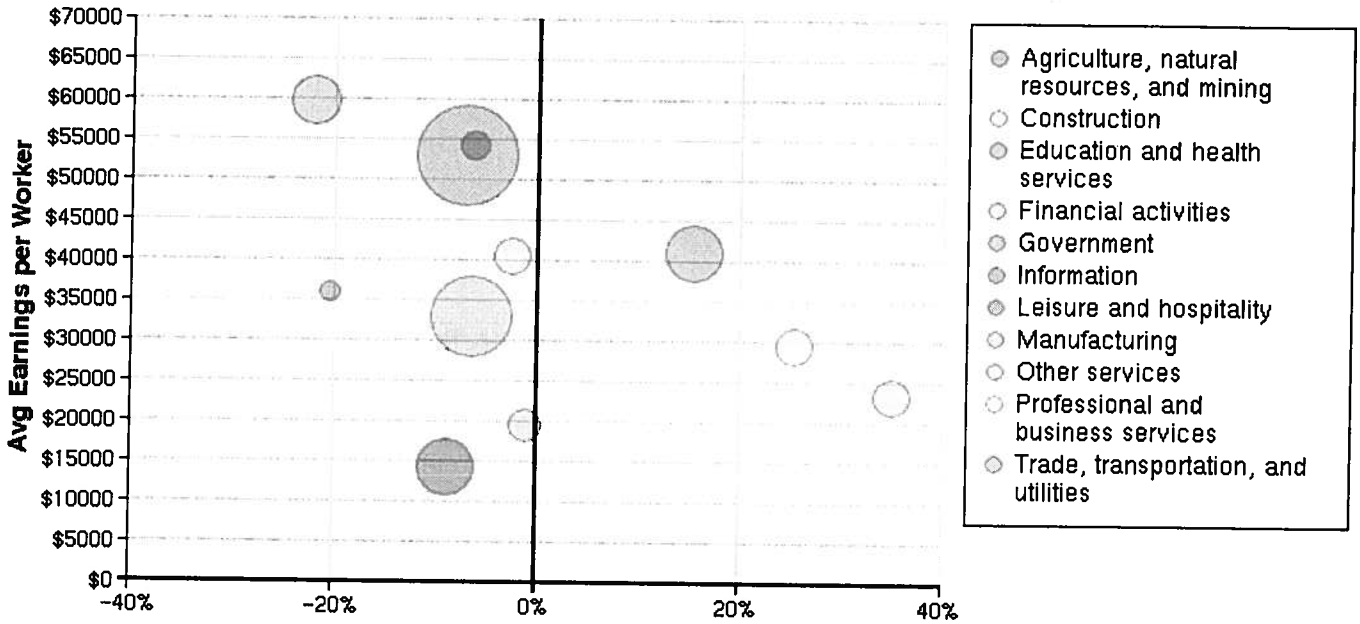
Growth was realized in the areas of education and health services with an additional 3,009 jobs (18%). The health care sector continues to grow, and demand is increasing in areas such as Certified Nurses Aids, home health care workers, many areas of nursing and physicians and throughout the industry as our population ages. There are a number of efforts targeted at meeting these areas of demand including the Upper Peninsula Health Care Roundtable and the UPWard Initiative Healthcare Committee. Focus on workforce development for the Healthcare Industry is critical for the region.

Financial activities and professional and business services had the highest growth, with 39% and 30% growth respectively. At the time of this report, no specific workforce development focus around these areas is in place; this may be a need for the future if the level of growth is sustained.

WHY IS THIS IMPORTANT?

- For the previous 10 years, job losses have dislocated workers in the region. These dislocations have impacted workers in sectors with high average earnings and low skills, leading to long-term unemployment for a large number of individuals. At the same time, however, skill levels required for high-paying manufacturing and health care sector jobs have increased, necessitating more skill upgrades to enter these positions. Simultaneously, both community colleges and universities have closed many programs that supply the labor force with skilled manufacturing workers, and waiting lists for health care related careers are a concern for many employers.

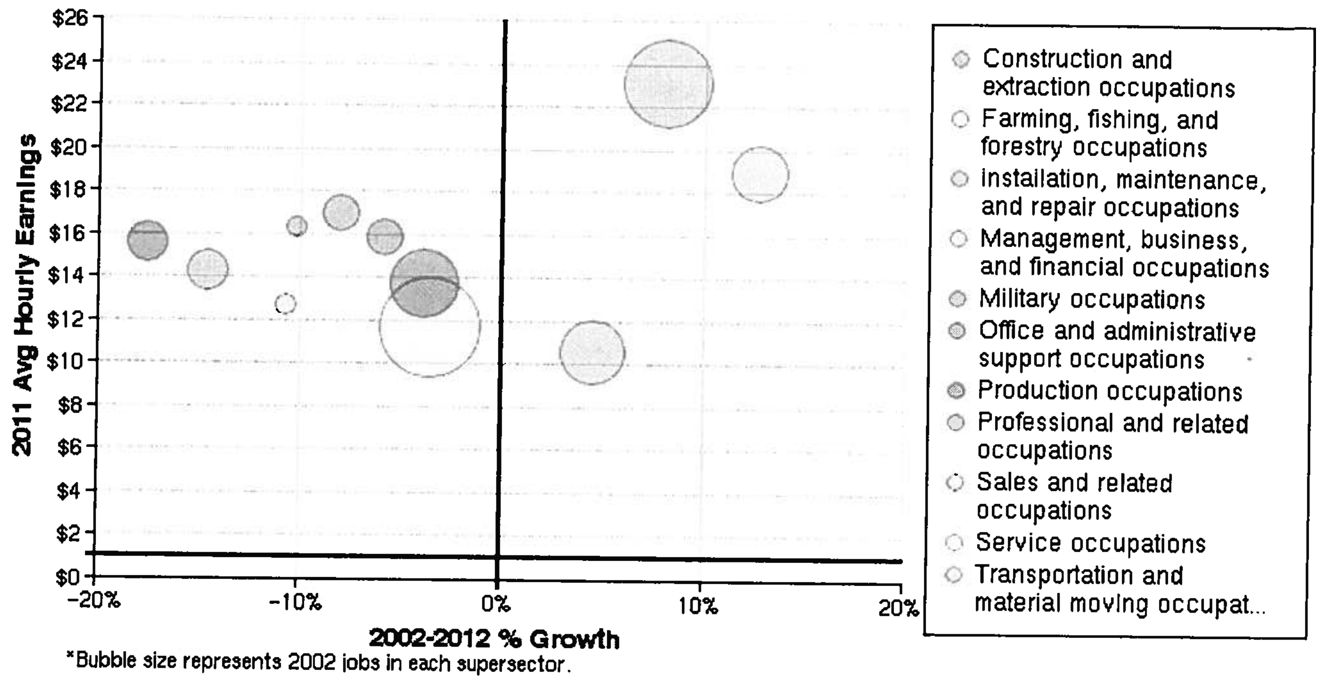
Industry Size and Growth



*Bubble size represents 2002 jobs in each supersector.

Description	2002 Jobs	2012 Jobs	Growth	% Growth	2011 EPW
Agriculture, natural resources, and mining	6,682	6,268	-414	-6%	$54,362
Construction	9,410	9,169	-241	-3%	$40,576
Education and health services	17,297	19,956	2,659	15%	$40,903
Financial activities	9,110	12,299	3,189	35%	$23,355
Government	36,529	33,944	-2,585	-7%	$52,984
Information	2,282	1,814	-468	-21%	$35,949
Leisure and hospitality	17,296	15,773	-1,523	-9%	$14,366
Manufacturing	13,873	10,819	-3,054	-22%	$59,818
Other services	7,792	7,700	-92	-1%	$19,603
Professional and business services	8,745	10,966	2,221	25%	$29,461
Trade, transportation, and utilities	28,593	26,719	-1,874	-7%	$33,023
Total	157,609	155,426	-2,183	-1%	$38,125

Occupation Size and Growth



Description	2002 Jobs	2012 Jobs	Growth	% Growth	2011 Avg Hourly Earnings
Construction and extraction occupations	8,650	8,141	-509	-6%	$15.86
Farming, fishing, and forestry occupations	1,947	1,738	-209	-11%	$12.77
Installation, maintenance, and repair occupations	7,836	7,208	-628	-8%	$17.00
Management, business, and financial occupations	14,616	16,468	1,852	13%	$18.91
Military occupations	871	782	-89	-10%	$16.30
Office and administrative support occupations	21,228	20,407	-821	-4%	$13.76
Production occupations	11,463	9,450	-2,013	-18%	$15.65
Professional and related occupations	26,962	29,151	2,189	8%	$23.14
Sales and related occupations	18,786	19,642	856	5%	$10.54
Service occupations	34,194	32,994	-1,200	-4%	$11.69
Transportation and material moving occupations	11,055	9,444	-1,611	-15%	$14.33
Total	157,609	155,426	-2,183	-1%	$15.61

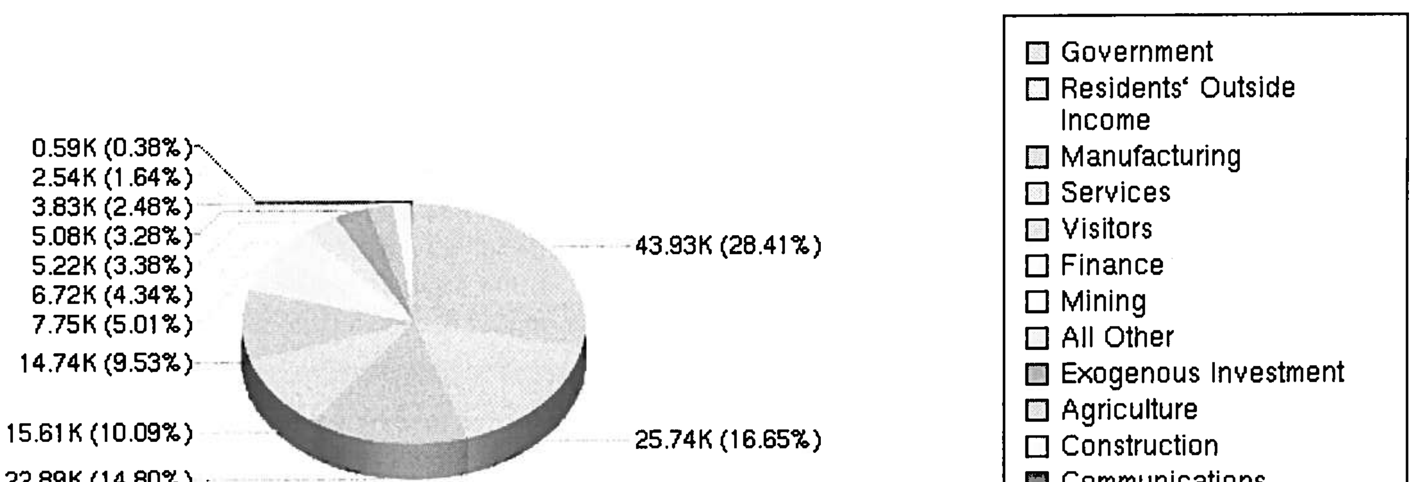
Wage Data

Government jobs continue to dominate the economy of the Upper Peninsula in terms of numbers of jobs and total earnings in the region. There are currently 43,928 jobs equating to 28% of overall employment and 33% of overall wages in the region. At an average of $43,000 per worker, many positions with benefits, these are family sustaining jobs; a number of the positions may be at risk. Layoff aversion and rapid response planning should occur as shrinking budgets reduce this area of the labor force.

While the current number of positions in mining makes up a mere 4% of total jobs, they are of critical importance to the region in terms of average earnings per worker at $56,000. Mining has had an historic place in the region's economy and continues to have a significantly positive impact. With new ventures on the horizon it is critical that a strategy is in place to support these efforts. Currently the UPWard Initiative's Natural Resources Committee is engaging in a number of strategies to support natural resources-based businesses throughout the region.

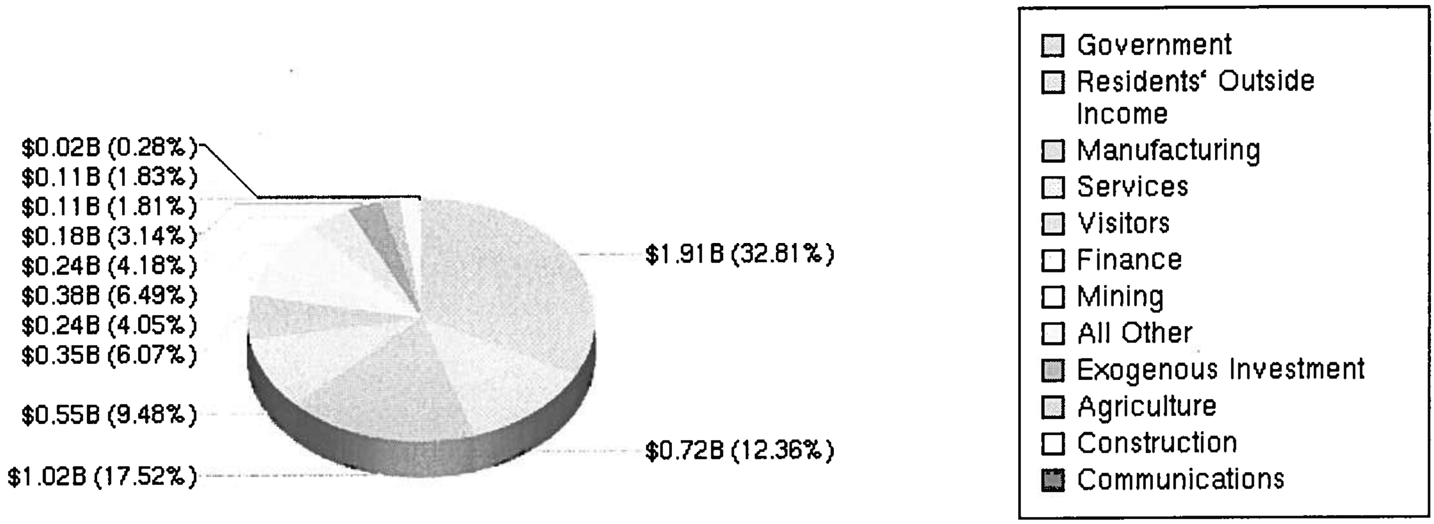
Even with significant losses of jobs over the previous decade, manufacturing remains a sizeable earnings generator with average earnings per worker of $45,000 and over a billion dollars of economic impact per year. More focus on increasing this area of the economy is critical to overall economic viability, particularly in the Western Upper Peninsula where closures and reductions in force have taken a dramatic toll.

2011 Jobs



Wage Data

2011 Earnings



Sector	Jobs	Earnings(K)	Jobs %	Earnings %	EPW(K)
Government	43,928	$1,908,218	28%	33%	$43
Residents' Outside Income	25,744	$718,634	17%	12%	$28
Manufacturing	22,891	$1,018,875	15%	18%	$45
Services	15,611	$551,477	10%	9%	$35
Visitors	14,739	$353,051	10%	6%	$24
Finance	7,751	$235,303	5%	4%	$30
Mining	6,719	$377,484	4%	6%	$56
All Other	5,222	$242,974	3%	4%	$47
Exogenous Investment	5,076	$182,480	3%	3%	$36
Agriculture	3,835	$105,304	2%	2%	$27
Construction	2,541	$106,267	2%	2%	$42
Communications	587	$16,304	0%	0%	$28

Source: EMSI Complete Employment - 2011.3

Employers Are Competing Globally and Locally

HOW ARE WE DOING?

Discussions with leading-edge employers in the region continue to make clear how strongly they are affected by the global marketplace. Most companies describe their businesses as being faced daily with competitive pressure around final costs, labor costs and competition for talented, committed and skilled labor. Companies are searching for sources of competitive advantages that may come through automation, quality efforts, unique market segmentation or diversification.

"The most relevant topic as it relates to us would be overseas competition. Two of our customers also purchase machined parts from China, and we're not able to get close to what they charge for a finished product. We are seeking to strengthen our customer base by both saturating our local market and segmenting into specialized markets."

"We have encountered issues in many forms or fashions ranging from people not knowing how to read a tape measure, perform simple multiplication or division, or how to use a reversible screw gun. My impression of many businesses (local and otherwise) when they complain that they cannot find good, qualified help, it isn't so much that the qualified people aren't out there, it's that the businesses don't want to pay what the job candidate is requesting. I get the feeling that we are in the middle of a period of readjustment downward in wages, and that of course is going to be very difficult. If the burdens are equally shared between the workforce and management, then it could be argued that the process is fair and eventually will result in a more competitive company. Our approach is to work to provide our customer with the best value, with the definition of that word being variable. What one customer values aren't always what another one does. Cost, Delivery, Quality, Innovation, Responsiveness are examples of what might take precedence as what our customer values most. It is our job to not only give the customer the best value service but also to help them better identify what it is they value. It requires more effort on our part, but it often rewards us with customers who are more like partners."

WHY IS THIS IMPORTANT?

Advanced manufacturing using skilled workers is a crucial strategy given global competition. Focusing on building a workforce capable of handling multi-tasked, technically-based, and multi–skilled jobs and working with firms willing to organize to that model is a fundamental shift from traditional manufacturing and defines the urgency and reality of shifting to advanced manufacturing given the realities of global markets for firms.

The Upper Peninsula Healthcare Roundtable Regional Skills Alliance has been Working Collaborating on Talent Enhancement Since 2002

- Membership has grown from 7 to 80 members from across the Upper Peninsula.
- Awarded Regional Skills Alliance Designation.
- Industry members contribute funds to produce nurse recruitment commercials.
- Reduced industry vacancy rate from 6.2% in 2002 to 4.8% in 2005.
- Gogebic Community College develops/offers Medical Coding.
- Bay College develops Nurse Refresher Course.
- Dickinson Healthcare Systems creates Career Pathway Book that is adopted by membership as a best practice to implement for secondary/post-secondary career exploration. It is re-titled, "Explore Career Pathways at ......".
- Marquette General Healthcare Systems and Northern Michigan University awarded a $1.7 million dollar Medicaid Disproportionate Share Grant Award to create accelerated training programs in Allied Health thus expanding nursing cohorts by:
    - 20 per class for CNAs to LPNs.
    - 20 per class of LPNs to RNs.
    - 70 Registered Nurses who became clinical faculty for the accelerated program.
- Provided grant dollars to 4 regional hospitals to train over 800 incumbent workers with on-line curriculum.
- Replicated best practice career fairs held at Chippewa War Memorial Hospital in Manistique and OSF St. Francis.
- Bay College develops on-line ADN courses.
- Train the Trainer Sessions held for the first time in the U.P. Trains over 30 nurses to be Certified Nurse Aid Instructors.
- Gogebic Community College expands its nursing program by 40 additional cohorts.
- Industry members promote understanding of the industry's economic impact; presentations given to economic development and chamber organizations.
- Workgroup formed to support UPWard Initiative strategy to grow regional economy by promoting healthcare in the U.P.
- UPHCRT chair Al Hendra recognized by the Michigan Works! Association as private sector Volunteer of the Year.
- Awarded the 2003 Service of Excellence Award by Operation Action U.P. (prior to becoming officially state recognized as an RSA).
- Annual conference held focusing on healthcare worker pipeline and industry needs.

The Upper Peninsula Regional Industrial Manufacturing Skills Alliance has been Working on a Number of Efforts since 2004

- Created marketing plan and outreach materials including: Website, Commercials, Video, Rack Cards and Posters.
- Coordinated and executed UP-wide school outreach campaign.
- Created and maintain manufacturing careers booklet.
- Planned, executed and analyzed two manufacturing worker needs surveys throughout the Upper Peninsula.
- Working with Upward Initiative Workforce and Education committee to conduct gap analysis from worker needs survey and training inventory.
- Created white paper regarding Michigan Merit Curriculum in partnership with Career Connections Group and distributed to legislators.
- Members participated in multiple panel discussions about worker needs and MMC.
- Create and distribute monthly "Made UP Here" article in the Business is UP date.
- Connections created and maintained with companies and Michigan Works! representatives in the Eastern and Western UP in order to address long- and short-term worker pipeline issues.
- Planned and executed multiple plant tours for parents, students and teachers in order to expose them to manufacturing work environments and career opportunities.
- Created an asset map of manufacturing worker pipeline activities throughout the UP and Northeast Wisconsin in order to leverage resources and attempt to avoid duplication among those activities.
- Planned and executed Lego Robotics Camps for 7-12 year old youth throughout the region.
- Created and distributed career exploration materials to school districts throughout the region.
- Working with a public-private partnership to create a youth-driven social media/video campaign around manufacturing careers.
- The following members have participated in Incumbent Worker Training programs through Michigan Works!: Pardon, VanAire, Nu-Vu, UP Machine, Marble Arms, Delta Manufacturing, UP Fabrication, NewPage, Superior Welding and Wendricks Truss.
- The following members have participated in short term training projects in partnership with Michigan Works! and regional training institutions: Engineered Machined Products, Stewart Manufacturing, Boss Snowplow, Systems Control, Loadmaster and Northwoods Manufacturing.

Employers Are Gaining Competitive Advantage Both from Quality Efforts and Cost Management

HOW ARE WE DOING?

Leading edge employers say competitive advantage requires a simultaneous focus on both quality and cost management. Quality is described as critical. More and more companies are being required by customers to be able to demonstrate capacity for reliability via IS 9001, lean manufacturing improvements or other compliance measures or indicators. Recently, cost has also returned as a strong requirement from customers.

A wide range of sophistication and commitment to continuous improvement exists within the manufacturing community, from no experience to start-and-stop experimentation to full-fledged continuous improvement based in strategic planning. In the latter cases, executives expect ongoing 10%-per-year gains emanating from continuous process improvement.

The cost pressures are real. One employer described global competitors as able to "supply finished product at lower cost than we could purchase raw materials." Firms state that high quality, delivered through uses of technology and skilled workers, is crucial to support the costs they charge. It is important to overcome the low-cost competition with high-tech solutions.

Many employers strategically engage their workers in quality improvement. Strategies include engaging the entire workforce in the continuous improvement process, conducting goal-setting meetings with workers, using a decentralized group leader approach.

WHY IS THIS IMPORTANT?

Advanced quality and cost are both essential to employers competing globally. Their workers must be capable of working with quality measurement tools and embrace continuous improvement as a core ingredient of employment. At the same time, increases in worker productivity are a continuing crucial issue given the cost pressure being felt by firms.

Growth Companies in the Region Are Struggling to Find Qualified Workers; Seeking Higher Skills

How Are We Doing?

While companies say they have great people working for them and the region is well known for a positive work ethic, it is also true that companies in the region face challenges around staffing. These challenges vary from professionals (engineers, managers, sales people and others) to skilled tradespersons (skilled maintenance, electricians, welders, etc.). Businesses at the low end struggle to identify, recruit, train and retain entry-level skilled tradespersons as well as general unskilled workers. Further, the entry-level people are reported to have skill and knowledge deficits in mathematics, reading, communication and interpersonal skills. Additionally, many young people are seen as immature in terms of their attitudes about work (lacking commitment, poor attendance, unwillingness to work overtime, unaware of the basic business needs for each employee to produce work having a value of some multiple of wages and benefits).

At the higher end, companies describe continuing difficulty at recruiting skilled professionals – engineers, technical managers or sales people. Further, while companies report that their workers are open or energetic about learning, many in union environments are somewhat constrained by union rules from the fullest application of continuous improvement methods.

Employers are looking for workers who function well in teams. Some of the firms operate with cross functional teams and expect the teams to resolve a variety of crucial issues, often under pressure. They need people to be flexible, open to change and versatile.

WHY IS THIS IMPORTANT?

Growth of good jobs appears to be in part dependent on availability of skilled workers. These firms are representative of the region's potential future organized around advanced manufacturing. It will be vital to understand more deeply the causes of staffing challenges and then finding their systemic solutions if this sector is to reach its growth potential.

Regions Top Clusters Require Education Beyond High School

How Are We Doing?

In addition to looking at key industries, it is important to understand the key occupations that drive a workforce area. How can policy makers begin to determine whether to focus on jobs that are highest paying, or those for which there is a demand? In looking at the quality of jobs in a region, one might look at the major job clusters as classified by the U.S. Department of Labor and their average wage for the region. We can also review jobs for total earnings and sales in the region as outlined below.

Description	Jobs	Earnings	Sales	EPW
Government	33,444	$1,721,850	$3,160,728	$51
Local government	21,704	$985,788	$1,548,348	$45
Retail Trade	19,026	$445,421	$1,007,519	$23
Health Care and Social Assistance	17,403	$752,383	$1,376,166	$43
Accommodation and Food Services	12,982	$192,069	$562,382	$15
Manufacturing	11,121	$660,388	$3,143,901	$59
Food Services and Drinking Places	9,570	$124,276	$344,236	$13
State government	9,428	$551,488	$1,173,930	$58
Construction	9,175	$396,781	$853,889	$43
Other Services (except Public Administration)	7,615	$150,697	$303,548	$20
Finance and Insurance	6,518	$211,820	$805,190	$32
Ambulatory Health Care Services	6,116	$318,661	$562,017	$52
Real Estate and Rental and Leasing	5,795	$89,812	$509,583	$15
Professional, Scientific, and Technical Services	5,722	$187,613	$324,303	$33
Real Estate	5,161	$67,213	$417,378	$13
Specialty Trade Contractors	5,113	$198,956	$428,161	$39
Hospitals	4,875	$293,756	$578,463	$60
Agriculture, Forestry, Fishing and Hunting	4,602	$117,285	$343,593	$25

In reviewing the data it is clear that the vast majority of the top occupations in the region require a minimum of an Associate's Degree. Again, we see that government-related positions dominate the region and are potentially a liability in terms of future dislocation events.

Human Resources

How Are We Doing?

Much like job clusters, there are many ways to analyze occupations including current employment level, estimated number of openings, projected rate of growth, hourly wage and training requirements. Analyzing a combination of all these factors is one way to sort out which current and emerging occupations are most critical to the region.

Health care and social assistance are an area of need for focus and attention. The UPWard initiative Health Care Committee, along with the UP Health Care Roundtable, have been addressing workforce related strategies since 2004. Some of those strategies include recruiting nurses and addressing policy-related barriers to increasing nurse class sizes.

Manufacturing is also a critical occupational cluster. Worker shortages and skills gaps are ever widening and with a lack of post-secondary educational opportunities, the sector requires renewed efforts to provide an adequate workforce both in terms of numbers and skill levels.

Top Ten Human Resource Challenges:

1. Globalization of the Workforce
2. Rapid Advances in Technology
3. Skill and/or Labor Shortages
4. An Evolving Definition of Skills
5. Lifelong Learning to Compete
6. An Aging Workforce
7. The "Left Behind, Lost" Workers
8. A Diverse Workforce
9. Retention of the Best Workers
10. Impact of Personal Life on Work

Top 50 Critical Occupations

Description	2011 Jobs	2012 Jobs	Change	% Change	Openings	% Openings	Annual Openings
Registered nurses	2,511	2,563	52	2%	96	4%	96
Managers, all other	1,532	1,581	49	3%	89	6%	89
Office clerks, general	3,456	3,482	26	1%	75	2%	75
First-line supervisors/managers of non-retail sales workers	907	952	45	5%	64	7%	64
Laborers and freight, stock, and material movers, hand	1,856	1,831	(25)	(1%)	63	3%	63
Nursing aides, orderlies, and attendants	2,118	2,151	33	2%	61	3%	61
First-line supervisors/managers of retail sales workers	2,231	2,242	11	0%	60	3%	60
Licensed practical and licensed vocational nurses	1,156	1,175	19	2%	56	5%	56
Secondary school teachers, except special and vocational education	1,568	1,576	8	1%	56	4%	56
Correctional officers and jailers	1,919	1,930	11	1%	54	3%	54
Truck drivers, heavy and tractor-trailer	2,080	2,074	(6)	0%	54	3%	54
Home health aides	793	836	43	5%	52	7%	52
Postsecondary teachers	1,681	1,699	18	1%	48	3%	48
Bookkeeping, accounting, and auditing clerks	2,209	2,229	20	1%	47	2%	47
Receptionists and information clerks	982	996	14	1%	41	4%	41
Maintenance and repair workers, general	1,795	1,800	5	0%	40	2%	40
Physicians and surgeons	856	880	24	3%	39	5%	39
Teacher assistants	1,224	1,236	12	1%	39	3%	39
Elementary school teachers, except special education	1,071	1,084	13	1%	38	4%	38
Accountants and auditors	921	943	22	2%	38	4%	38
Insurance sales agents	719	729	10	1%	34	5%	34
Secretaries, except legal, medical, and executive	2,054	2,055	1	0%	34	2%	34
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,019	1,023	4	0%	32	3%	32
First-line supervisors/managers of office and administrative support workers	1,020	1,028	8	1%	31	3%	31
Logging equipment operators	699	708	9	1%	30	4%	30
Financial analysts	269	293	24	9%	29	11%	29
Chief executives	644	654	10	2%	28	4%	28
General and operations managers	879	878	(1)	0%	28	3%	28
Financial managers	473	492	19	4%	27	6%	27

Electricians	599	606	7	1%	27	5%	27
Automotive service technicians and mechanics	1,066	1,058	(8)	(1%)	25	2%	25
Social and human service assistants	481	496	15	3%	25	5%	25
Carpenters	1,713	1,702	(11)	(1%)	24	1%	24
Emergency medical technicians and paramedics	315	329	14	4%	24	8%	24
Management analysts	430	446	16	4%	24	6%	24
Teachers and instructors, all other	559	573	14	3%	22	4%	22
Executive secretaries and administrative assistants	877	886	9	1%	22	3%	22
Team assemblers	652	637	(15)	(2%)	20	3%	20
Production workers, all other	715	695	(20)	(3%)	20	3%	20
First-line supervisors/managers of construction trades and extraction workers	768	771	3	0%	19	2%	19
Mental health and substance abuse social workers	378	388	10	3%	19	5%	19
Military Occupations	773	775	2	0%	19	2%	19
Business operation specialists, all other	582	587	5	1%	19	3%	19
Clinical, counseling, and school psychologists	265	275	10	4%	18	7%	18
Human resources, training, and labor relations specialists, all other	379	383	4	1%	18	5%	18
Police and sheriff's patrol officers	533	535	2	0%	17	3%	17
Plumbers, pipefitters, and steamfitters	600	598	(2)	0%	17	3%	17
Construction laborers	1,462	1,465	3	0%	17	1%	17
Middle school teachers, except special and vocational education	473	478	5	1%	17	4%	17

Top Occupations Are Requiring More Complex Skills

How Are We Doing?

Economic Modeling Systems, Inc. has identified a process to link critical occupations in a geographic area or industry sector with the critical knowledge requirements and skills associated with those occupations. At the macro level across 50 occupations, this information becomes very valuable. An examination of the skills associated with the critical occupations defined in this report results in a pattern of basic skills as identified in the top ten list below (6 of the top 10 are either Basic-Content or Basic-Process skills).

It is encouraging that two, complex Problem-Solving Skills – Problem and Information Gathering – rank high on the list. They are joined by two more such skills, Installation and Troubleshooting. However, the lack of occupational diversity in the region has an impact on this list as well. Among the top ten skills, there are no Social Skills (Persuasion, Negotiation, etc.) or Resource Management Skills (Time Management, Management of Financial Resources, etc.)

The following are the top 10 skills associated with the region's top 50 occupations[1]:

Skill	Skill Type
Science	Basic Content
Repairing	Complex Problem-Solving
Equipment Maintenance	Complex Problem-Solving
Critical Thinking	Basic Process
Reading Comprehension	Basic Process
Installation	Complex Problem Solving
Operation Monitoring	Basic Process
Learning Strategies	Basic Content
Mathematics	Basic Content
Troubleshooting	Complex Problem Solving

WHY IS THIS IMPORTANT?

- A rising trend among workforce boards and other policy groups across the nation is to identify the demand for skills in addition to the occupations. "It doesn't matter what we call them," an employer will say. "It's what they do that matters." For example, many employers say "get me someone with basic skills and we'll train them from there," strategies are needed to address these issues especially with low skilled adults.

This type of skills information is valuable in looking at how well people are prepared to work within an industry as well as what the gaps might be for transferring skills from one industry to another. For example, while the presentation above looks at the top 10 skills associated with the region's top 50 occupations, in the future, an analysis of these skills and occupations within a particular industry could show what type of career paths are possible, what skills are in demand, and what basic and advanced training might be necessary.

Skills and work activities information and definitions are taken from O*NET, a U.S. Department of Labor occupational database that details various characteristics including knowledge, skills, and abilities.

Top Work Activities Are Supporting Need for Higher Order Skills

How Are We Doing?

In-demand skills as analyzed on the previous page provide only one approach to looking at skills in the region. What about the work activity itself? What are people actually doing once they have the "appropriate skills?"

Based on the Top 50 Critical Occupations, the region's top 10 work activities[1] are:

Top 10 Work Activities

Work Activity	Type of Work Activity
1. Getting Information Needed to Do the Job	Information Input
2. Identifying Objects, Actions, and Events	Information Input
3. Updating and Using Job-Relevant Knowledge	Reasoning or Decision Making
4. Controlling Machines and Processes	Work Output
5. Communicating with Other Workers	Communicating or Interacting
6. Analyzing Data or Information	Mental Processes
7. Making Decisions and Solving Problems	Reasoning or Decision Making
8. Handling and Moving Objects	Work Output
9. Product Quality Assurance	Mental Processes
10. Repairing and Maintaining Equipment	Work Output

WHY IS THIS IMPORTANT?

- **Jobs are increasingly becoming not just about the "what" but also the "so what."** Six of the top ten work activities involve Information Input (where and how information and data are gained that are needed to perform the job) and mental processes (the processing, planning, problem-solving, decision -making, and innovating activities that are performed with job-relevant information). Based on these activities, jobs are increasingly focused on innovation and improvement.
- **Work activities in critical occupations don't emphasize routine physical labor.** Given the region's large number of manufacturing jobs, it is not surprising to see basic activities such as Controlling Machines and Processes, and Repairing and Maintaining Equipment and Handling and Moving Objects, as well as, Making Decisions and Solving Problems and Identifying Objects, Actions, and Events for healthcare jobs.
- **Some knowledge-based work activities don't show up.** There are warnings in terms of activities not on the list. Interacting with Computers, Implementing Ideas or Programs and Thinking Creatively are all work activities generally connected with knowledge-based economies that do not appear on this list. This is an area that should concern Upper Peninsula workforce policy makers.

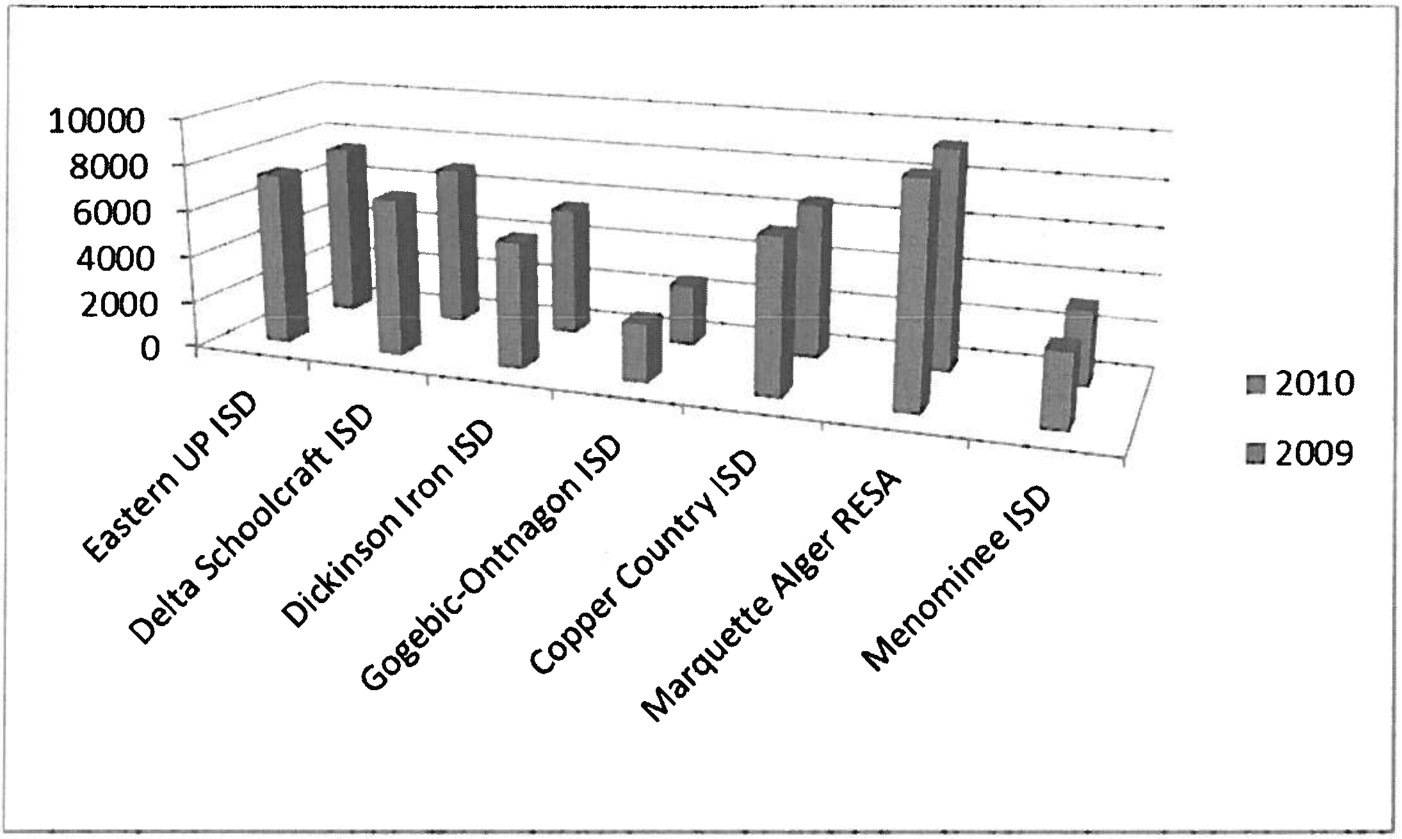
On balance, the top work activities in the area point strongly toward building higher order skills in the manufacturing industry and validate the need for soft skills. They also suggest areas for emphasis by education and training providers.

[1] Skills and work activities information and definitions are taken from O*NET, a U.S. Department of Labor occupational database that details various characteristics including knowledge, skills, and abilities.

School Enrollments Are Declining in the Region

How Are We Doing?

Public school enrollments in the Upper Peninsula declined by 2 percent from school year 2009 to school year 2010. Public school enrollments declined in all of the Upper Peninsula Intermediate School District regions. These declines can be attributed to slow population growth and the changing age structure of the region's population. (2010 – 2011 Data most recent available at time of publication.)



Michigan Department of Education CEPI Data

WHY IS THIS IMPORTANT?

- **Declining enrollments reflect aging of region.** Policy makers need to keep in mind the smaller student counts will mean a smaller pool of entry workers as they graduate. This is a challenge that must be managed to ensure that our employers have the workforce they need to succeed.

Percentage of Students Enrolled in Vocational Education Remains High Despite Fewer Program Offerings

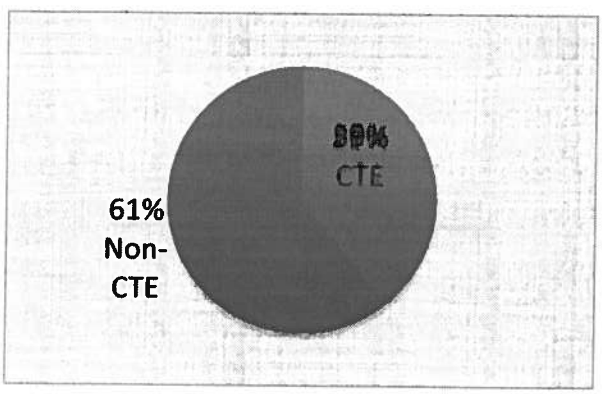
How Are We Doing?

State certified Career and Technical Education programs are required to have advisory committee input and align to industry technical standards, national skills standards, academic content requirements and provide career and employability skills training. CTE Courses across the region vary but include agriculture, automotive, aviation/airframe, child care/teacher cadet, construction, cosmetology, culinary/hospitality, drafting/CAD, welding, electrical, electro mechanical, finance/accounting, graphic arts, health occupations, information technology, machine tool, marketing and welding. These programs have a high success rate of graduates going on to post-secondary training or directly into the workforce.

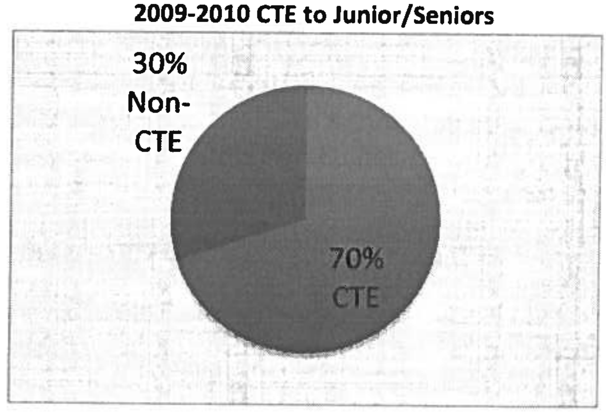
2009-2010 Follow-up Survey of 549 CTE DSISD Students

Graduation Rate	96%
Placement (employed and attending college)	91%
Placement Related	76%
Full-time Employment	23%
Part-time Employment	74%
Continuing Education	75%
Apprenticeship	0%
Certified	7%
Associate	33%
Bachelor	58%
Other	2%

2009-2010 CTE to All High School Enrollment



2009-2010 CTE to Junior/Seniors



Central Upper Peninsula Region

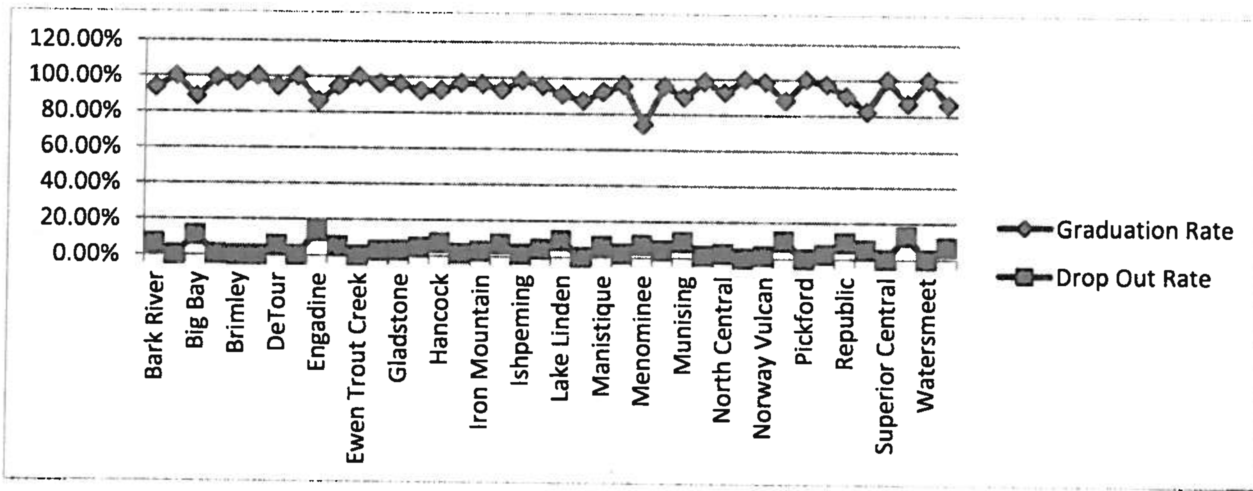
WHY IS THIS IMPORTANT?

- **Strong vocational education enrollment is positive for an Advanced Manufacturing focus.** The strong enrollment in career and technical education indicates that our region has the ability to focus on how to attract students to advanced manufacturing careers, healthcare careers and the importance of ensuring relevance of school programs that support preparation for those careers.

Graduation Rates Are Generally High; Enrollment at Higher Education Institutions in the Region Are Declining

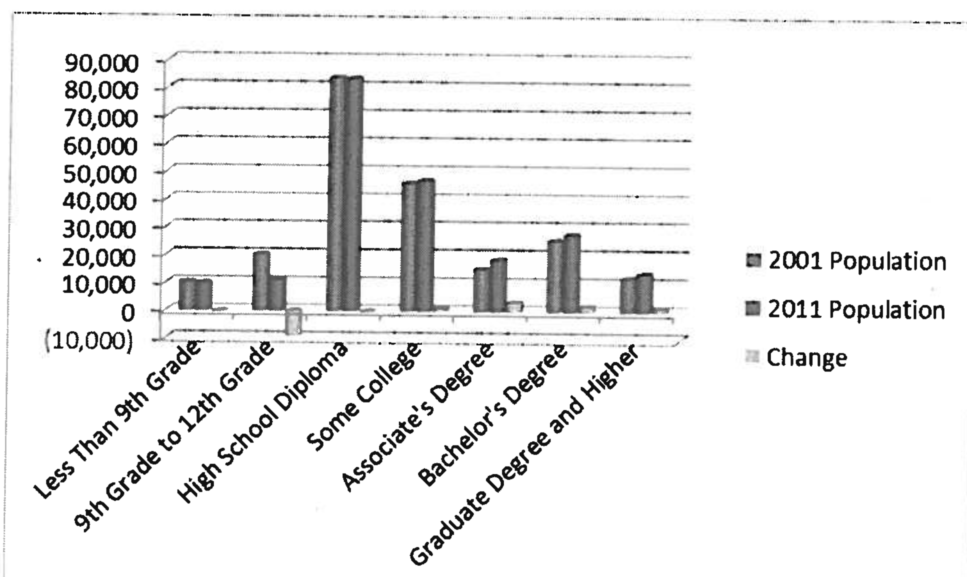
How Are We Doing?

For the 2010-2011 school year, the high school graduation rates in Upper Peninsula are significantly higher than those statewide. Through the past decade, enrollment at Michigan's community colleges have seen a steep, upward trajectory, according to the Michigan College Association; however, community colleges are seeing their numbers beginning to fall. The rise in community college enrollment over the past decade has been fueled by several trends: unemployed workers looking to switch careers or improve their skills, the increasing percentage of high school graduates going onto higher education before entering the job market, and more students starting at community college because of spiraling tuition at four-year schools. The overall graduation rate is 94.03%.



Source MI School Data and CEPI

Over the last ten years, the educational attainment of our population has grown with associate degrees, but declined in the number of individuals with a 9th to 12th grade education level attainment.



Demographic	2001 Population	2011 Population	Change	% Change
Less Than 9th Grade	10,407	9,991	(416)	(4.00%)
9th Grade to 12th Grade	20,297	11,185	(9,112)	(44.89%)
High School Diploma	83,748	83,407	(341)	(0.41%)
Some College	45,852	46,942	1,090	2.38%
Associate's Degree	15,353	18,735	3,382	22.03%
Bachelor's Degree	25,537	27,663	2,126	8.33%
Graduate Degree and Higher	12,247	13,714	1,467	11.98%

The need for a highly-skilled workforce is an on-going discussion among our Upper Peninsula employers and supports the need for our workforce to not be content with earning a post-secondary degree or certificate. Jobs will require that our workforce have a commitment to life-long learning or "talent enhancement" that builds their skill sets for career advancement and potential company growth. The National Center for Educational Statistics has indicated that although they have not defined the term "non-traditional" student, they do see that characteristic such as delaying enrollment into college (does not enter postsecondary education in the same calendar year that he or she finished high school); attends part time for at least part of the academic year; works full time (35 hours or more per week) while enrolled; or does not have a high school diploma (completed high school with a GED or other high school completion certificate or did not finish high school).

Project E^3 (Excellence in Education and Employability) was introduced as a pilot project in 2008 to engage GED and high school completion students prior to their secondary skill attainment throughout the Central Upper Peninsula counties of Delta, Dickinson and Menominee. The focus was to develop a stronger foundation of academic and personal skills to act as the bridge to post-secondary training and ultimately placement into careers. The key partners under this project are Bay College, North Menominee Community Schools, Iron Mountain-Kingsford Community Schools, the Job Force Board and its Michigan Works! Service Center system. This non-traditional focus on a population that is staying in the Upper Peninsula supports the need to ensure that all of our worker pipeline has the skill sets to earn family sustaining jobs.

WHY IS THIS IMPORTANT?

- Graduation rates suggest strong commitment to the value of a high school diploma. The Upper Peninsula graduation rates support the premise that families and students have bought into the crucial reality that workers must have at least a high school diploma to succeed. The challenge now is engaging people in thinking about their higher education and lifelong learning needs.
- Increase in non-traditional students is a good sign for the region. The critical occupations identified in this study predominantly require some form of post-secondary education and training. Understanding the causes behind enrollment trends and student choices will be critical to figuring out what will align the needed learning opportunities and the skill building the region's employers' need.

Region is Falling Behind in "College Ready" High School Graduates Compared to National Average

How Are We Doing?

Nationwide, 25% of 201 1high school graduates were considered college-ready, with a little under half of high school students taking the test. In Michigan, all public high school students take the test and about 19% met college-ready benchmarks. According to the Michigan Department of Education, Houghton Central High School had the highest percent of college-ready graduates at 47.4%. Other high schools that exceeded the national average included Jeffers High School, Marquette Senior High School and Gwinn High School, and Rudyard. Other Upper Peninsula Schools exceeding the state average included Cedarville High School, Negaunee High School, Calumet High School, Hancock Central High School and Lake Linden-Hubbell High School.

College readiness is defined as the percentage of students that meet the following four minimum scores on the ACT: 18 on English, 22 on math, 21 on reading and 24 on science. ACT's College Readiness Benchmarks are the minimum ACT test scores required for students to have a high probability of success in credit-bearing college courses—English Composition, social sciences courses, College Algebra, or Biology. The following is an average of the schools within the listed intermediate school districts that reported college ready scores to the Michigan Department of Education for school year 2011.

All Upper Peninsula Schools exceeded both the national and state average for high school graduation rates. These rates include alternative education.

ISD	College Ready	Graduation Rate
Copper County ISD	23.5%	90.8%
Delta Schoolcraft ISD	15.7%	87.9%
Dickinson Iron ISD	19.4%	87.35%
Eastern UP ISD	15.6%	85.39%
Gogebic-Ontonagon ISD	11.1%	94.70%
MARESA	20.7%	96.42%
Menominee ISD	13.3%	81.51%
Nationwide Average	25%	73.6%
State of Michigan Average	17.3%	74.33%

MI School Data

WHY IS THIS IMPORTANT?

- National and state tests, such as the ACT college admissions exam, provide useful comparative measures of student achievement and potential. They give an indication of the ability of entry-level workers to pursue further education and to acquire advanced workforce skills. The test results in the Upper Peninsula region are indicators that young workers will require additional preparation in order to meet the demands of an increasingly technical workplace

Are We Testing for Skill Mastery?

How Are We Doing?

In the last few years Michigan has made significant strides in improving its accountability standards and means to measure educational progress with educational testing. These efforts are aiding in strengthening the academic track in all Michigan high schools. One step in this direction has been the adoption of WorkKeys® as part of the Michigan Merit Exam for high school juniors. Based on recommendations from the Council for Labor & Economic Growth (CLEG), the State of Michigan adopted the Michigan National Career Readiness Certificate (NCRC). The NCRC indicates that an individual has demonstrated predetermined skill levels on three core WorkKeys® assessments: Applied Mathematics, Locating Information, and Reading for Information. WorkKeys® assessments measure "real world" foundational skills that are critical to job success. The NCRC offers individuals, employers and educators a universal standard, certifying the attainment of three workplace skills valuable in a majority of the jobs in today's labor market. The NCRC provides Michigan with the ability to quantify the skills of its workforce, attract new businesses, identify skill gaps and provide the opportunity for remediation, provide employers with validated certification of applicant skill levels, and provide individuals with recognized verification of their ability to demonstrate valuable workplace skills.

According to ACT, "WorkKeys® provides important information no matter what type of skilled or professional career a student plans to pursue after high school. *Studies show that occupations requiring higher skills in math, locating information, and reading pay higher entry-level salaries.* In fact, skill levels show a stronger correlation to pay than education levels do. By increasing their skill levels while they are still in school, students increase their opportunities for higher salaries in the future. Large numbers of students are entering the workforce without enough skills to qualify them for the jobs they want. *According to the U.S. Department of Labor, more than 1.5 million students leave high school each year inadequately trained for even entry-level jobs.* Because WorkKeys® measures skills valued by employers, students can use their results to get a better picture of their chances for success in the workforce and to improve areas where their skills are weak. Schools can use the information—along with input from employers—to ensure that their courses of study provide adequate work skills training to meet the needs of businesses.

Over emphasis on MME scores, college admission tests, etc., are taking teachers away from a focus on personal growth and development and on education for citizenship and character development. Some balance must be found, because strong social skills and positive work attitudes are expected of today's employers, along with technical mastery. To address this gap, Michigan Works! The Job Force Board is partnering with three regional school districts in the Central Upper Peninsula: Bay Middle College, North Star Academy and Escanaba Area High School to introduce the Jobs for American Graduates Program (JAG). The JAG National Curriculum equips participants with 37 employability competencies that will prepare them for the workplace.

WHY IS THIS IMPORTANT?

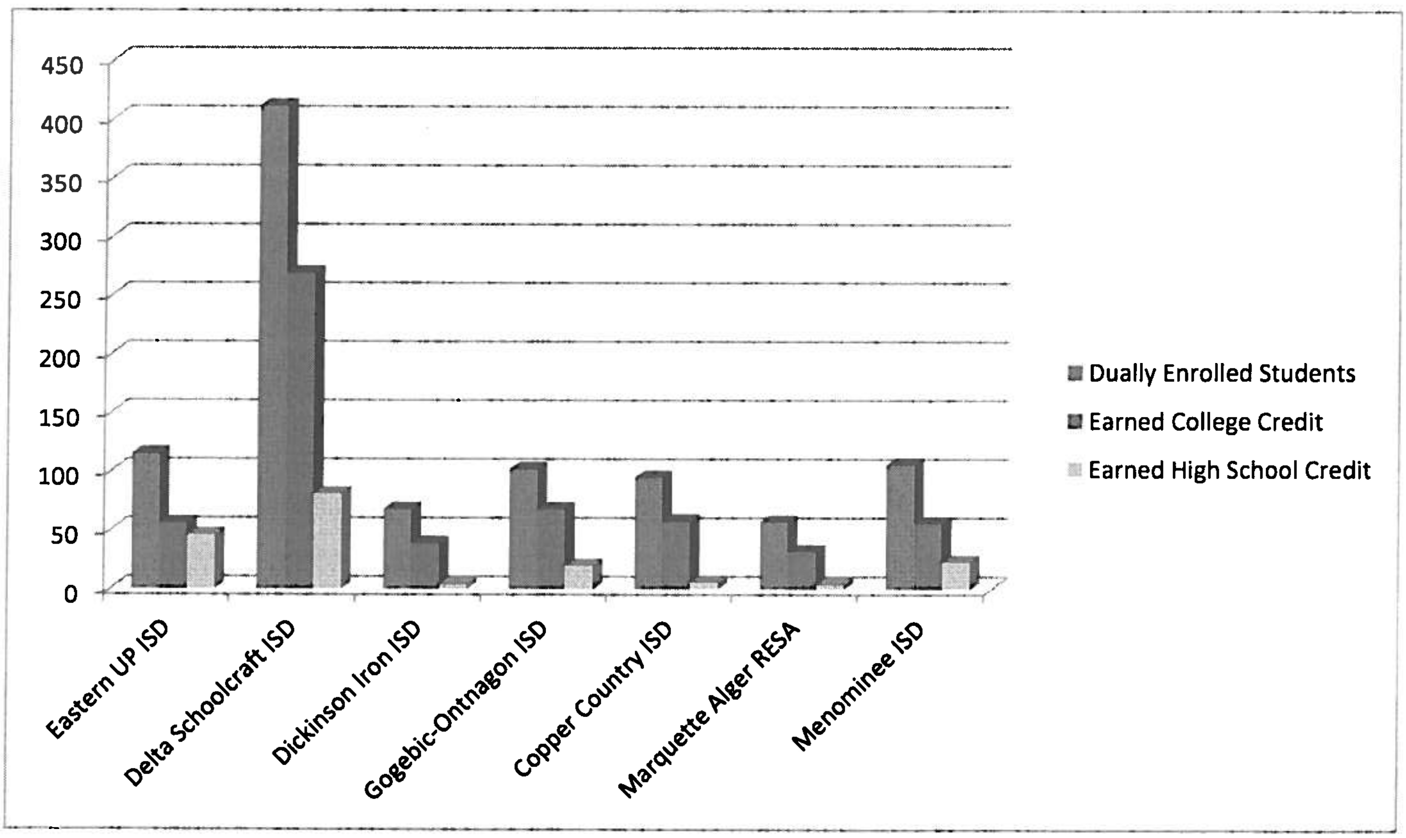
- Credentialing can help both worker mobility and employer confidence. If the region is to pursue a high performance strategy, high levels of capital investment in plant and equipment must be matched with high levels of skill acquisition and retraining at all levels of the workforce. Employers must have confidence in the uniformity of credentials, and workers must have confidence that credentials have the credibility to be marketed in a variety of employment settings.

Educational Infrastructure is Offering an Array of Programs---Are They Meeting Industry Needs?

How Are We Doing?

All the elements of a superior educational system can be found in the Upper Peninsula, including a strong presence of universities and community colleges. Our universities and community colleges are well connected to local business and industry, and many of our K-12 schools have some connection to businesses. Surprisingly, we find that when opportunities exist for high school students to participate in employer-sponsored, post-secondary career tracks, high school students fail to take advantage of this clear pathway to education and employment. Cleveland Cliffs in Marquette County and Verso Paper in Dickinson County offer opportunities for high school students to attend college, access an internship and, on completion of training, a job. Few students are taking advantage of this opportunity; more research as to why needs to occur. It does give an indication that our region needs to be more diligent in providing career awareness opportunities to our youth and, ultimately, our community.

High school students do have opportunities to earn both college and high school credit through dual enrollments. Information from the Michigan Department of Education, as indicated in the chart below, shows greater student enrollment in this opportunity in the Delta Schoolcraft Intermediate School District.



Perhaps a best-kept secret in education are the articulation agreements that regional Intermediate School Districts have with local colleges and universities. Michigan Technological University, Ferris State University, Gogebic Community College, Bay College, NWTC, Northern Michigan University and Ferris State University offer the opportunity to gain advanced placement credit to those students who are enrolled in, or have taken, Career & Technical Education courses. Articulation is the process where Career & Technical Education students who have demonstrated specific skills through an assessment process are granted college credit for those skills when they enroll at a participating college or university. Articulation agreements include Computer Aided Design, Business, Auto Tech, Health Occupations, Electronic Tech and Robotics, and Welding.

The Michigan Merit Curriculum requires that 8th grade students make career pathway choices. Minimal exposure to occupations within the defined career pathways can lead to students making some uninformed career choices.

As the economy has affected our workforce, and our regional workforce boards have supported many dislocated or unemployed individuals returning to school, it is just as important to ensure that these populations are choosing training that will ultimately support their employment in high-growth, high-demand jobs.

In the past, our post-secondary educational institutions have focused almost exclusively on educational programs. Now, these centers of knowledge are agents of change in an information economy that depends on the rapid transfer of knowledge from learning institutions to business and government. Our universities and community colleges/M-TEC Center are becoming a base for business incubation, industry centers of excellence and technology transfer centers.

In order to move at the speed of light and meet industry needs, these training enhancement partners must be proactive in identifying business needs before the needs become critical to a business' vitality and develop training that is timely.

The workforce investment boards have had limited funding to help support incumbent worker training, with strict parameters on the ability to support that training, at critical times for businesses to avert layoffs. Developing incumbent worker training that is cost effective and multi-employer focused is imperative to building the skill sets of our incumbent workforce.

WHY IS THIS IMPORTANT?

- Clear career pathways are important to develop. Americans are more motivated to participate in learning if the pathway of learning is well articulated and the credentials widely understood and marketable.
- Dual credit is a motivating factor to continue with post-secondary education, either full-time or part-time, and in the work setting.
- The Upper Peninsula has workforce boards and training institutions that need to support a region-wide reach and mission – these organizations must play an expanded role in regional leadership and development.

Career Opportunities and Workforce Trends in the Region Are Not Readily and Consistently Communicated to Educators or Students

How Are We Doing?

Schools, in particular, recognize that the local economy and its needs are by no means the primary motivator for preparing young people for careers. In fact, state standards, funding formulas, parents and students are far more important in determining what the student learns and how high education is pursued. On the other hand, the lack of labor market and career information is partly to blame for insufficient preparation of young people for the world of work.

Most secondary schools are focusing on meeting the No Child Left Behind requirements and working with students to meet the Michigan Merit Curriculum requirements. Regional workforce boards have partnered with education to bring career awareness activities to schools.

One way of helping students identify career choices is through the sponsoring of career fairs, job shadowing or employer visits. Annually, the Sault Ste. Marie School sponsors an 8th grade career fair at which students visit War Memorial Hospital and have opportunities to explore healthcare careers. The Upper Peninsula Regional Industrial Manufacturing Skills Alliance (UPRIMSA) members visited regional schools to talk to high school and middle school students about career opportunities in manufacturing. The UPRIMSA also sponsored tours of manufacturing facilities for parents and teachers to educate them about career opportunities for their children. The region's intermediate school districts continue to support career preparedness activities in their region, as long as the funding or financial support is available. The Marquette Alger Regional Employment Service Agency (MARESA) partners with Northern Michigan University in the spring of each year to host a "Pathways to your Future" event where 11th graders from across Alger and Marquette County have opportunities to listen to speakers representing various occupations within their chosen career pathway.

Summer youth employment activities sponsored by regional workforce boards provide eligible youth opportunities to "earn while they learn," building their soft skills while exploring and experiencing occupations within their chosen career pathways. Intermediate school districts, colleges and universities host internships for student credit to help students learn about the world of work requirements and to explore career paths.

WHY IS THIS IMPORTANT?

- **Practice/experiential education is an important learning tool.** It not only helps with the application of theory to real world situations, but motivates the student. It can also foster innovation and entrepreneurship at earlier stages in the learner's career.

Conclusion

This *State of the Workforce Report* is intended to *describe* the current conditions; it was not designed to *advocate* certain policy recommendations. In the coming months, the UPWard Initiative and the Michigan Works! Workforce Investment Boards will continue to engage many people across the region to define the actions that need to happen around workforce issues, informed by this research.

This report suggests several opportunities to be considered as that action plan is framed:

1. **Integrate and expand educational opportunities in Advanced Manufacturing and Health Care.** The lower the population growth, the more an area must depend on productivity improvement for economic growth. The Upper Peninsula's economic opportunities in advanced manufacturing (and potential similar opportunities in health care) point to building relevant skills as the path to that increased productivity. Leaders of the region should spend considerable time crafting and implementing a world-class career/vocational system that is equal in quality and perception to the academic track already available. Such a system will need strong industry and community support and be grounded in mastery of skills that can be credentialed.

2. **Encourage and support the upgrading of skills of the incumbent workforce.** The employer interviews conducted for this report make it clear that leading firms in the region value and use higher order skills of their workforce. One strategy could be to build on that base by strategically focusing on how to increase the critical skills needed by workers in high productivity work settings. Upgrading strategies can take many forms, including industry skill alliances spanning multiple firms, building career pipelines within or across industries, organizing innovative financing mechanisms to encourage skill upgrading, and other approaches.

3. **Use the *State of the Workforce Report* and supporting data to put timely information about labor market choices in the hands of students, parents, educators, business, labor, and other decision-makers and influencers.** This report is a first attempt to transform labor market information from a difficult to understand, statistician-focused activity into understandable information that may be used to make career, education and training decisions on a continuing basis. The Workforce Investment Boards plan to put the report and the substantial supporting information that supports it onto its web site. Regular updating will be crucial to keep it current and alive. In addition, given the gaps and time delays in federal labor market information sources, locally generated original research would also be hugely valuable. For example, leaders of the region should consider complementing these databases with a statistically-sampled survey of human resource professionals across the region on at least an annual basis. Information would cover such matters as jobs available, emerging career opportunities, age distribution of the existing workforce by occupation, and changing skill expectations of employers.

4. **Increase the testing and credentialing of knowledge and skills mastery.** Educational leaders of the region would do well to adopt and widely use basic skills and technical skills assessment tools that could become understood and used by workers, businesses and educators. For example, educating business and education as to the purpose of WorkKeys® and its value could be adopted as a basic skills test in the workplace. Using common tools widely would create a common language across the region that would strongly connect employer needs with skill development activities.

5. **Sell the region to employers on the basis of a commitment to constantly upgrade the skills of our workforce.** The field of economic development is changing rapidly, and economic developers need marketing information to demonstrate to existing and prospective employers that this is a good region to do business. One of the most powerful approaches to economic development is to focus on how the region constantly upgrades the skills of its workforce. The region is endowed with very active community economic development organizations and professional economic developers. These groups work well together under the Upper Peninsula Economic Development Alliance and the UPWard Initiative. They are well positioned now to market the region based on its labor force competitiveness.

6. **Work closely with high growth firms to understand their needs for workforce solutions to support continuing growth.** This study reaffirms that staying in regular contact with employers is a necessity to ensure that the region's talent policy initiatives are grounded on the issues central to the growth of firms that value and use skills and knowledge. This concept applies whether focused on advanced manufacturing or other growth areas such as health care.

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